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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/042,231	01/11/2002	Masaki Nakano	03500.016103	4817

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EXAMINER

RICHER, AARON M

ART UNIT	PAPER NUMBER
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2628

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/042,231	Applicant(s) NAKANO, MASAKI	
	Examiner Aaron M. Richer	Art Unit 2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 15-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 15-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see Remarks, filed July 10, 2007, with respect to 35 USC 112 rejections of claims 1 and 15-20 have been fully considered and are persuasive.

The 112 rejections of claims 1 and 15-20 have been withdrawn.

2. Applicant's arguments with respect to 35 USC 103 rejections of claims 1 and 15-20 have been considered but are moot in view of the modified ground(s) of rejection.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1 and 15-18 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. These claims recite a system comprising various means. Examiner must look into the specification to determine what structure these means describe. In the instant case, the specification does not appear to have structural support for these limitations. Instead, the specification describes these means as "blocks" representing processes controlled by or instructions read by a CPU (see p. 12 and p. 23). Claim 20, which recites a computer readable medium, is further evidence that these blocks actually represent instructions. Thus, one can conclude that the "means" in the system of claims 1 and 15-18 are program instructions, and the "apparatus" recited is actually a computer program. A computer program, *per se*, is non-statutory, as it is functional descriptive material (see MPEP 2106.01), and not a process, machine, manufacture, or composition of matter.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 15-17, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suga (U.S. Patent 6,791,624) in view of Yokoyama (U.S. Patent 6,449,018).

7. As to claims 1, 19, and 20, as best understood, Suga discloses an image processing apparatus comprising:

resolution converting means for converting an image into a reduced image (col. 6, lines 25-30)

multiscreen synthesis means for composing one screen by arranging plural images in the one screen (fig. 10-11; col. 8, lines 25-44; col. 9, lines 13-18; col. 11, lines 22-27);

image quality adjustment value storage means for storing image quality adjustment values for plural kinds of image quality adjustment processes (fig. 1, element 110; fig. 8-9; col. 9, line 55-col. 10, line 13);

image quality adjustment process means for executing the image quality adjustment processes for plural images on the basis of the image quality adjustment values stored in said image quality adjustment value storage means (col. 9, lines 37-49; col. 10, lines 13-23); and

control means for converting an input image into a first image to which an image quality adjustment process is executed by said image quality adjustment process means on the basis of an image quality adjustment value which is determined in advance before performing an image quality adjustment operation stored in said image quality adjustment value storage means (col. 9, lines 37-65; col. 10, lines 13-23; col. 4, lines 34-47), and similarly for converting the input image into a second image to which an image quality adjustment process is executed by said image quality adjustment means on the basis of an image quality adjustment value for newly performing an adjustment operation, and then for displaying the converted first and second images and a pre-conversion third image on one screen with an arranged state by said multiscreen synthesis means (col. 9, lines 37-42; col. 4, lines 34-47; col. 8, line 64-col. 9, line 3 and col. 11, lines 22-27; also see col. 8, lines 33-38 for a pre-conversion "default" third image),

wherein the image quality adjustment value which is determined in advance is a value which is not updated in the adjustment operation (values shown in fig. 8 are determined in advance; col. 8, lines 50-63; col. 10, lines 5-13; the values are described as "current set values" not adjusted values).

Claims 1, 19, and 20 further recite a resolution converting means that executes after a quality adjustment operation. The Suga reference, however, discloses a quality adjustment operation after a resolution converting operation (see fig. 5-6; the resolution-converted image is the image later adjusted for quality). The reference differs from the claimed invention only in order of operations. *In re Burhans* 154 F.2d 690, 69 USPQ

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330 (CCPA 1946) holds that selection of any order of performing process steps is *prima facie* obvious in the absence of new or unexpected results (See MPEP 2144.04).

Applicant's disclosure appears to disclose both embodiments in which resolution adjustment occurs first (fig. 1-fig. 7; also see embodiments 1-4 described) and also embodiments in which resolution adjustment occurs after quality adjustment (see p. 21; the blocks can be "mutually replaced"). Applicant does not disclose any new or unexpected results from performing quality adjustment first, and in fact seems to disclose that performing resolution adjustment first is preferred, since that is the subject described in detail in the first four embodiments. Absent any new and unexpected results from performing quality adjustment first, examiner can conclude that just as in *In re Burhans*, the rearrangement of steps is *prima facie* obvious. Thus it would have been *prima facie* obvious to one skilled in the art to modify Suga to adjust quality before resolution, as in the claimed invention.

Suga further does not disclose an apparatus wherein said control means can display multiple images with respective sizes different from each other. Yokoyama, however, discloses a split screen wherein respective sizes of images can differ (fig. 3b-3c; also see col. 3, lines 2-5 for disclosure of more than two images on a screen). The motivation for this is to give priority to a "main" image (col. 1, lines 38-56). It would have been obvious to one skilled in the art to modify Suga to show different images at different sizes in order to give priority to a main image as taught by Yokoyama.

8. As to claim 15, Suga discloses an apparatus further comprising image reduction means for reducing the input image, wherein said multiscreen synthesis means

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composes the one screen by arranging the plural images reduced by said reduction means (col. 4, lines 34-47, col. 7, lines 47-61, col. 8, lines 45-col. 9, line 4).

9. As to claim 16, Suga discloses an apparatus further comprising trimming means for trimming a part of the input image, wherein said multiscreen synthesis means composes the one screen by arranging the plural images trimmed by said trimming means (col. 4, lines 34-47, col. 7, lines 47-61, col. 8, lines 45-col. 9, line 4).

10. As to claim 17, Suga discloses an apparatus wherein the image quality adjustment value which is determined in advance before performing the image quality adjustment operation is a value which was previously set at a time of manufacturing of said apparatus (col. 9, lines 56-65).

11. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suga in view of Yokoyama and further in view of Matsuzaki (U.S. Patent 6,492,982).

12. As to claim 18, Suga discloses an apparatus wherein the image quality adjustment value includes the image quality adjustment value of each of lightness, contrast, hue, and sharpness (fig. 8-9). Neither Suga nor Yokoyama expressly discloses an apparatus wherein the image quality adjustment value includes chromaticity and RGB balances. Matsuzaki, however discloses these image quality adjustment values with motivation being to enhance image display (fig. 20; col. 11, lines 26-45). It would have been obvious to one skilled in the art to modify Suga in view of Yokoyama to adjust chromaticity and RGB balances in order to enhance image quality as taught by Matsuzaki.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron M. Richer whose telephone number is (571) 272-7790. The examiner can normally be reached on weekdays from 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on (571) 272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AMR
8/29/07

A handwritten signature in black ink, appearing to read 'K. M. Tung', with a long, sweeping horizontal stroke extending to the right.

KEE M. TUNG
SUPERVISORY PATENT EXAMINER